2005 Groundwater Sampling and Oversight

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Deseret Chemical Depot
Restoration Advisory Board Meeting
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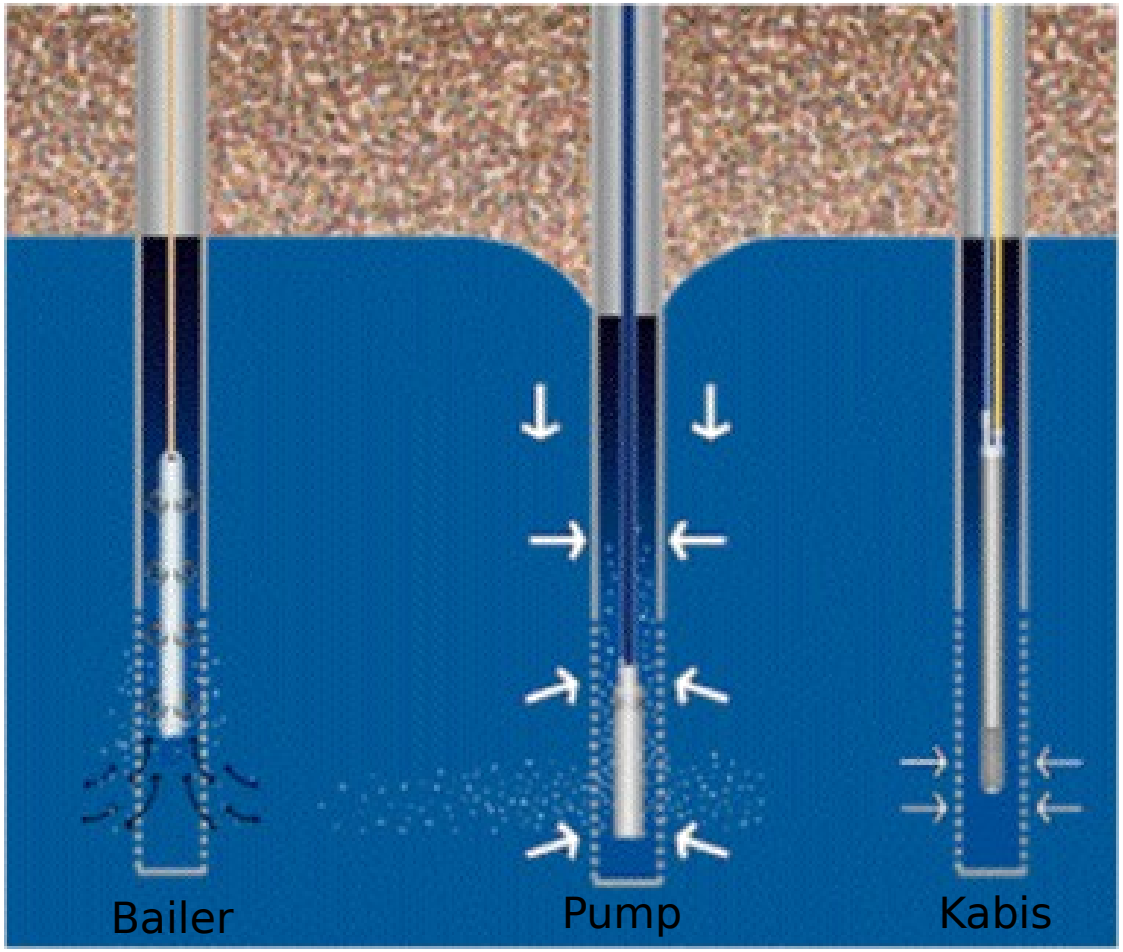
Presentation Overview

- Discription of the 2005 Sampling Approach
  (Using Kabis sampler and techniques)
- Summary of Sampling Program and Results

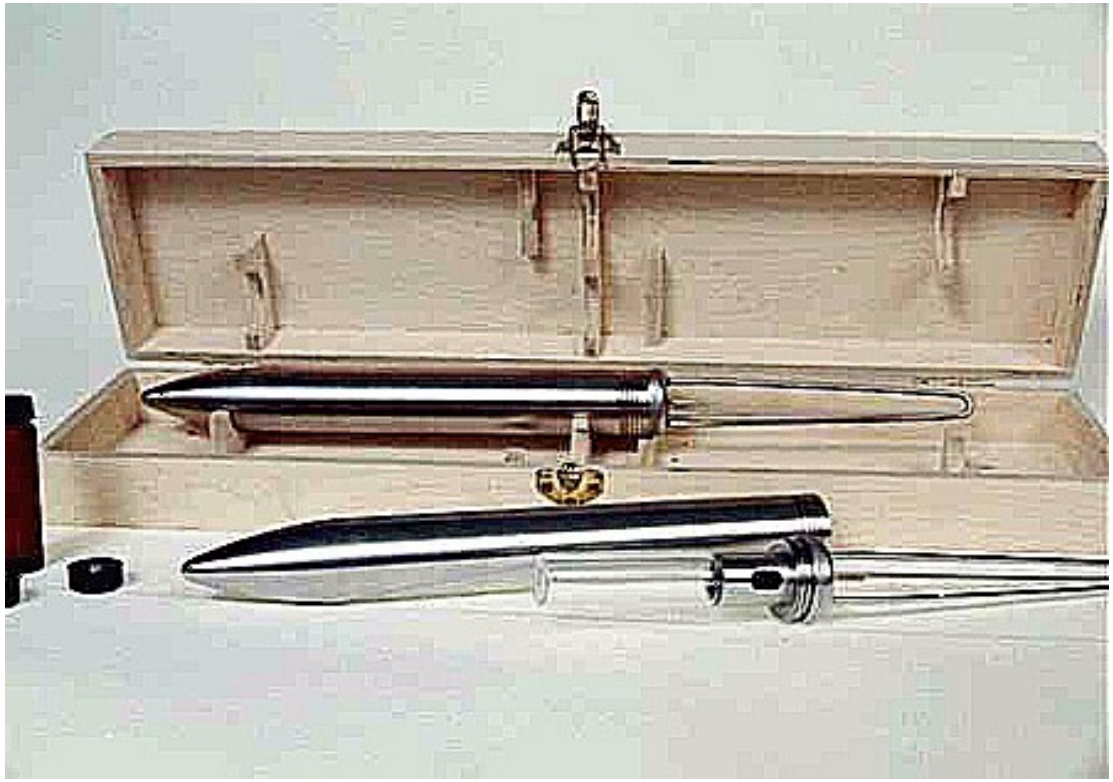
Low-Flow Sampling Approach

- Draws-in groundwater from immediately surrounding formation
- Does not create vertical flow gradient
- Provides depth discrete sample
- Provides high-quality sample
- Does not disturb groundwater

Kabis Sampling Approach Compared to Traditional Methods



Kabis Sampler



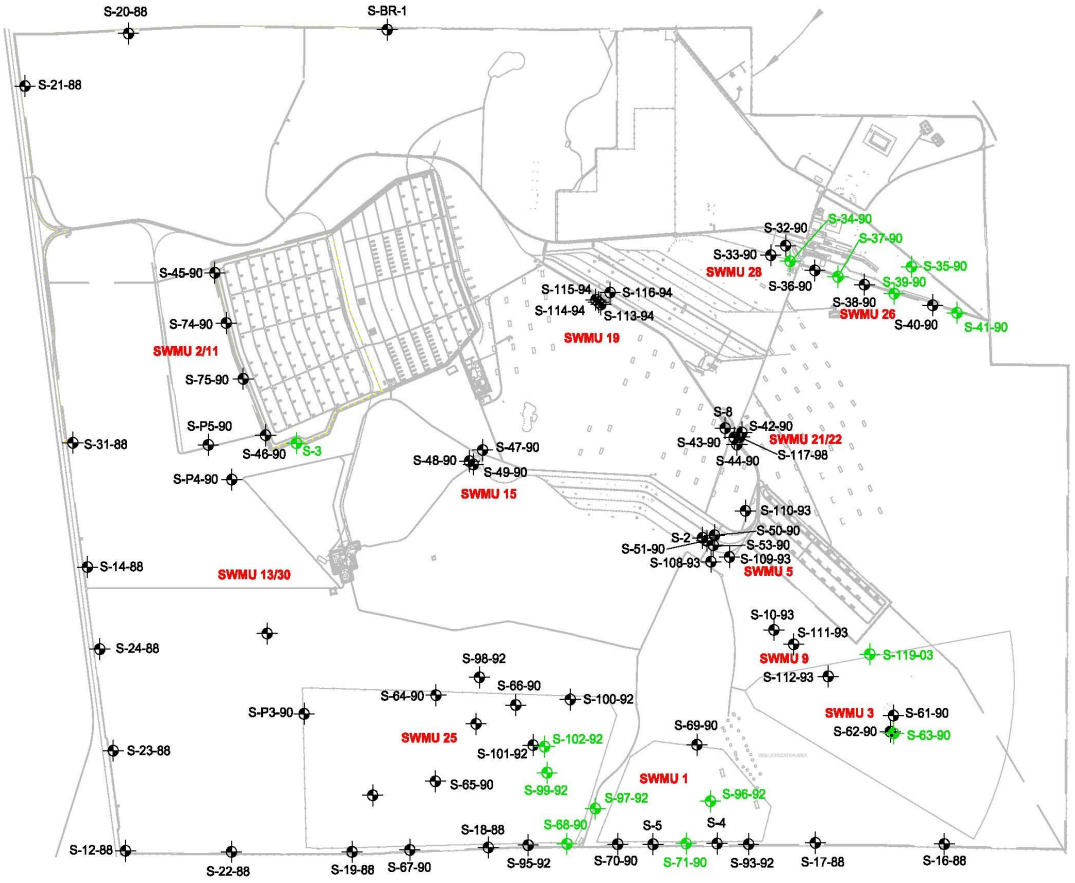
Kabis Sampler Benefits

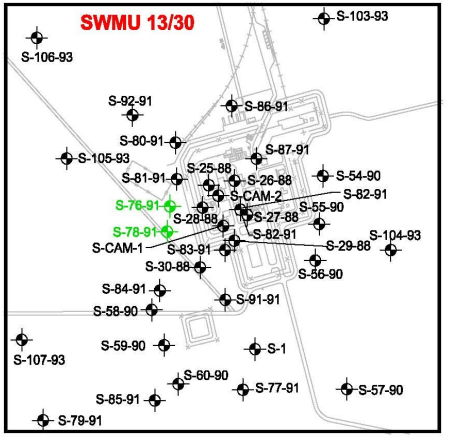
- Minimal Investigation Derived Waste
- Small and easily handled
- No moving Parts
- No electrical or air supply necessary
- Efficient Sampling With a Pump Rig
- Easily decontaminated
- Obtains depth discrete sample

2005 Groundwater Sampling Program

- Measure Groundwater Depths and Elevations in 113 Wells
- Sample Groundwater in 16 Wells at nine SWMUs
- Prepare Groundwater Monitoring Report

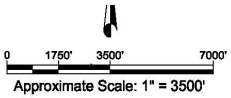
DCD Groundwater Monitoring Wells and SWMUs





Detail A

Wells sampled during 2005 event



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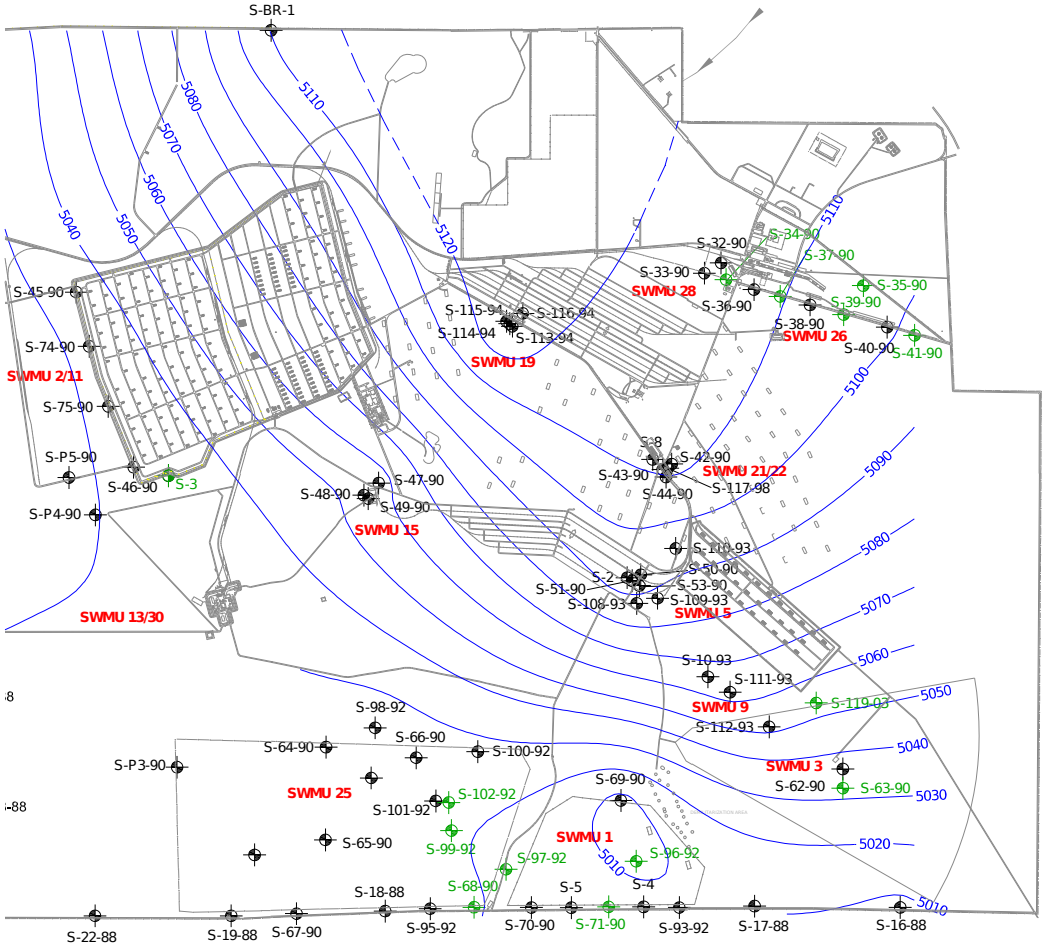
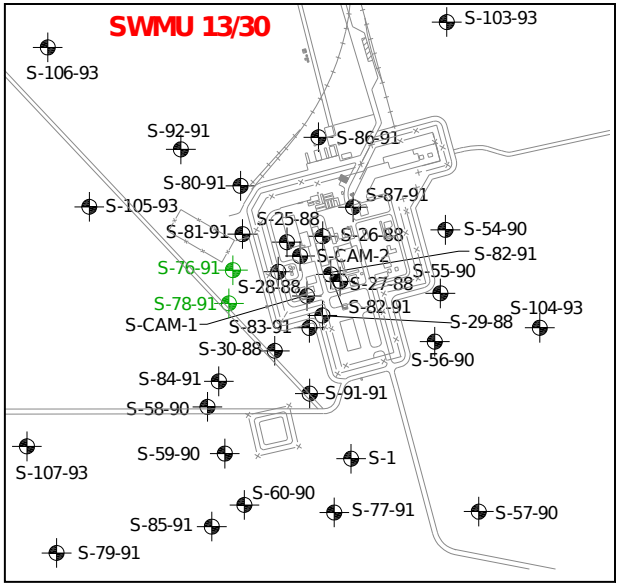
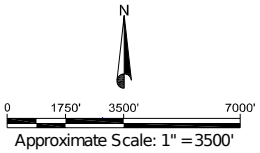
Groundwater Elevation Contours







Monitoring Well Monitored for Depth-to-Water

Monitoring Well Monitored for Depth-to-Water, Depth-to-Bottom, and Sampled

5020 Groundwater Elevation Contour (elevations is in feet above mean sea level)

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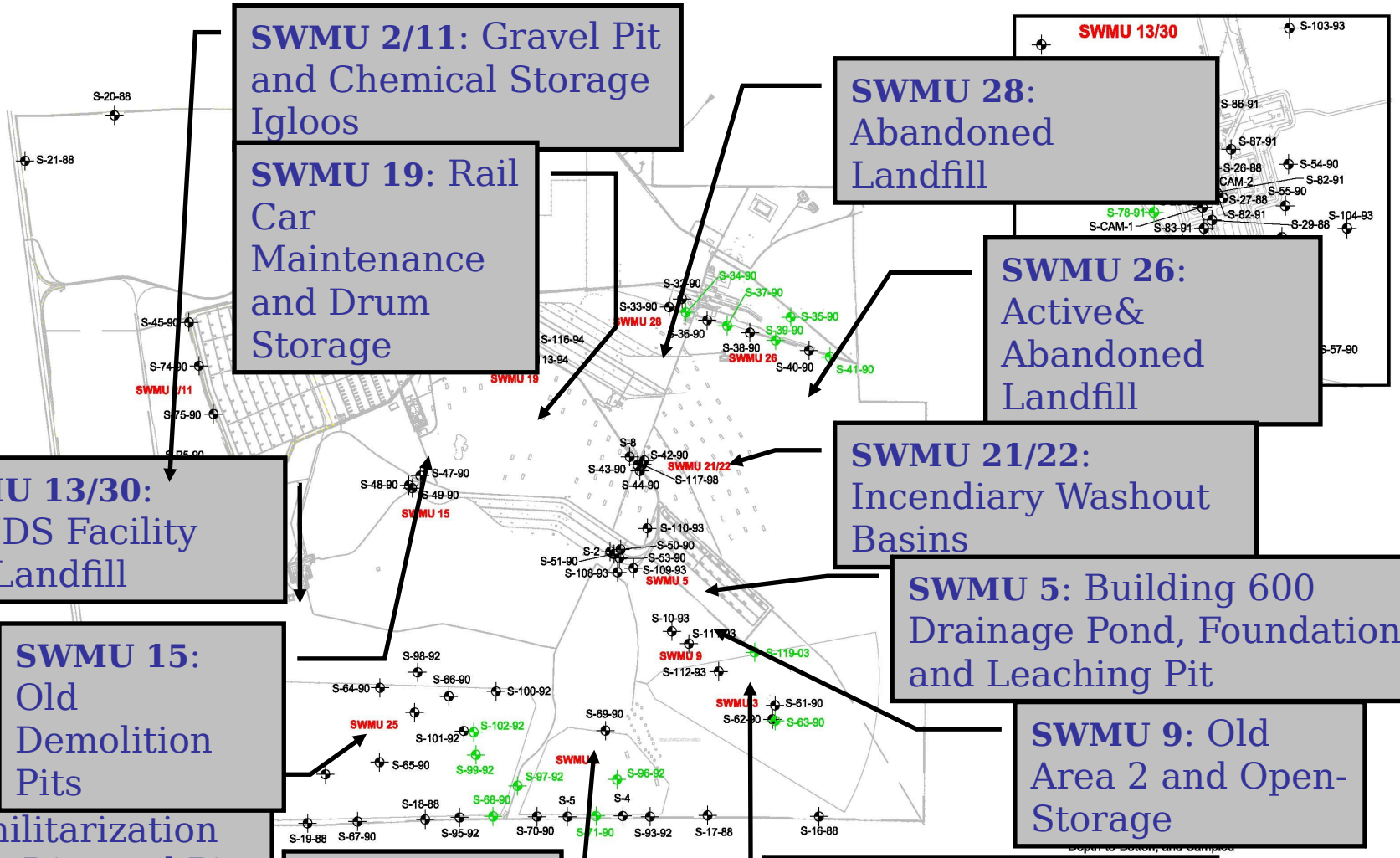
Historical Use of SWMU Areas



SWMU 2/11: Gravel Pit and Chemical Storage Igloos

SWMU 19: Rail Car Maintenance and Drum Storage

SWMU 28: Abandoned Landfill

SWMU 26: Active& Abandoned Landfill

SWMU 13/30: CAMDS Facility and Landfill

SWMU 21/22: Incendiary Washout Basins

SWMU 5: Building 600 Drainage Pond, Foundation, and Leaching Pit

SWMU 15: Old Demolition Pits

SWMU 9: Old Area 2 and Open-Storage

SWM Demilitarization Area Disposal Pits

SWMU 1: East Demilitarizat ion Area

SWMU 3: Trench Used for Decontamination Operations

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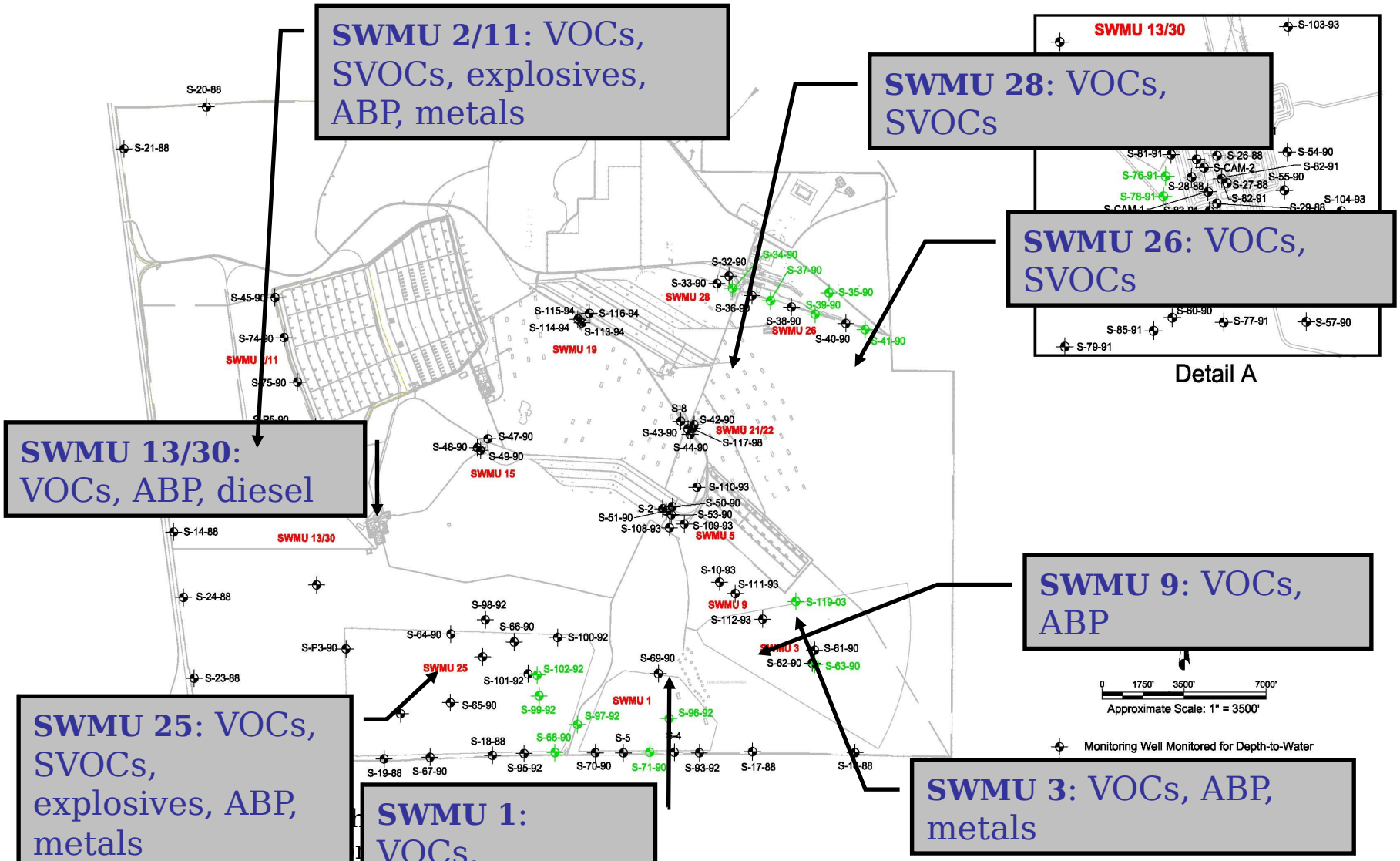
2005 Analytical List



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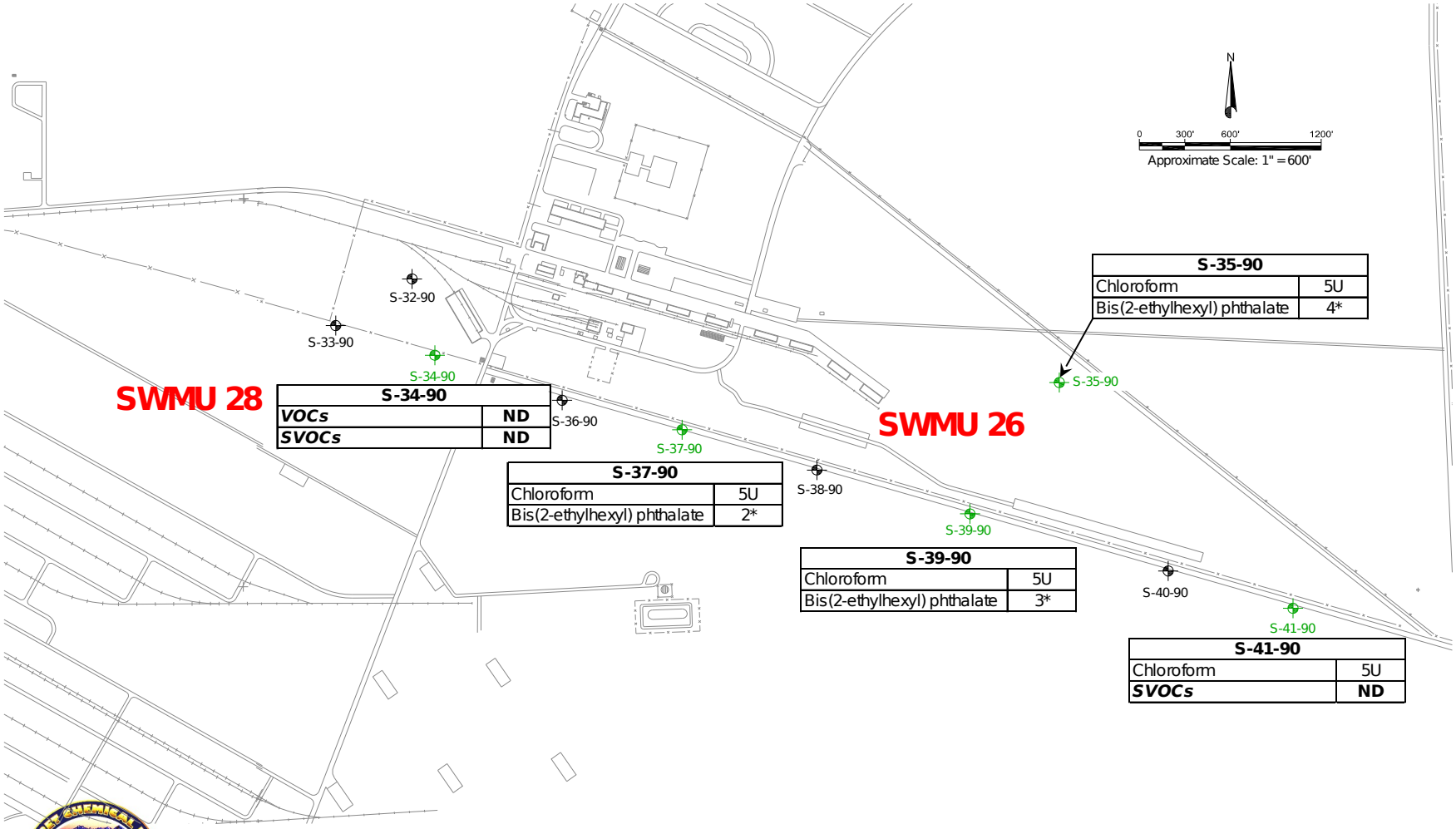
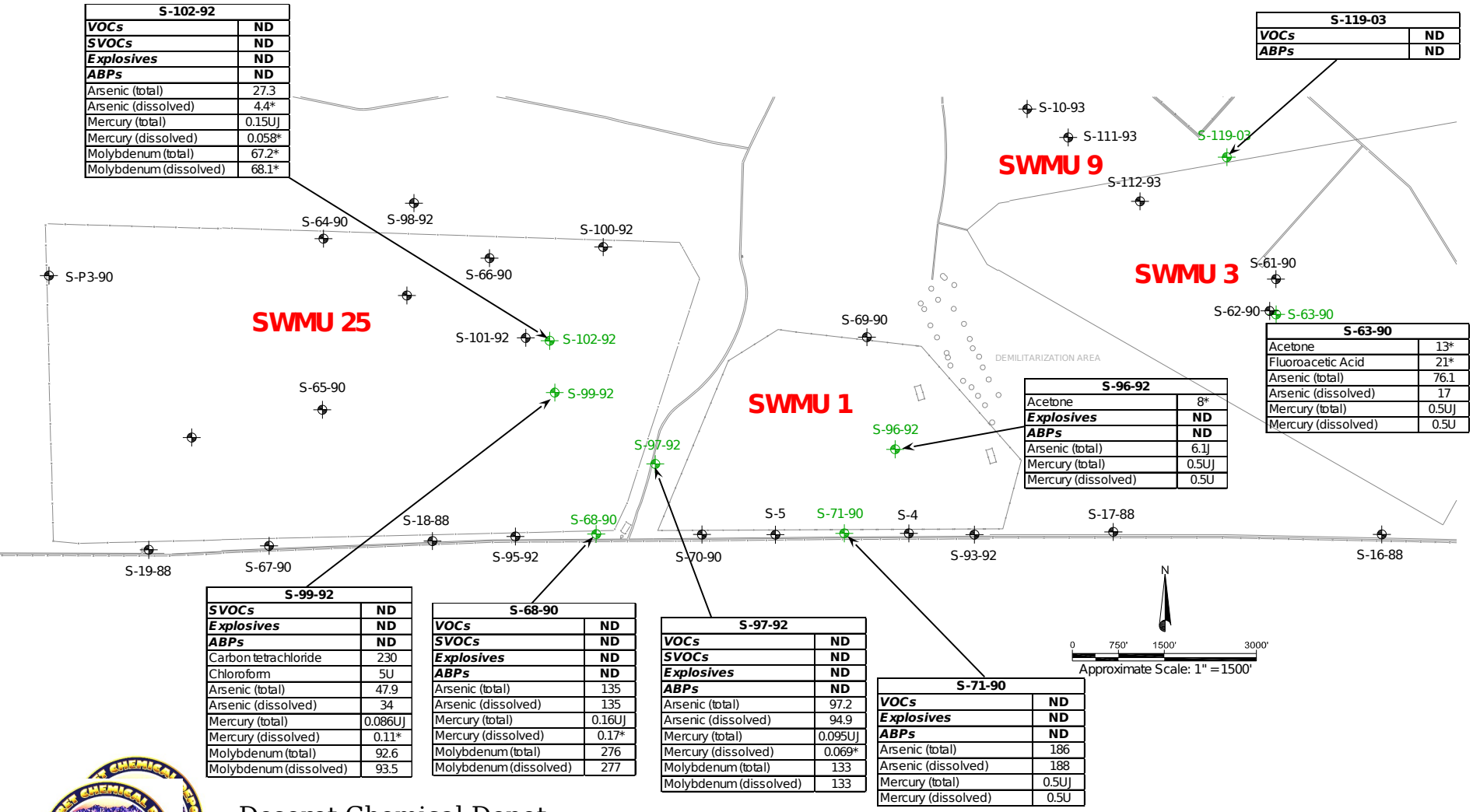
DCD SWMUs 26 and 28 Sampling Results



(in ug/L)

DCD Southern SWMU Sampling Results



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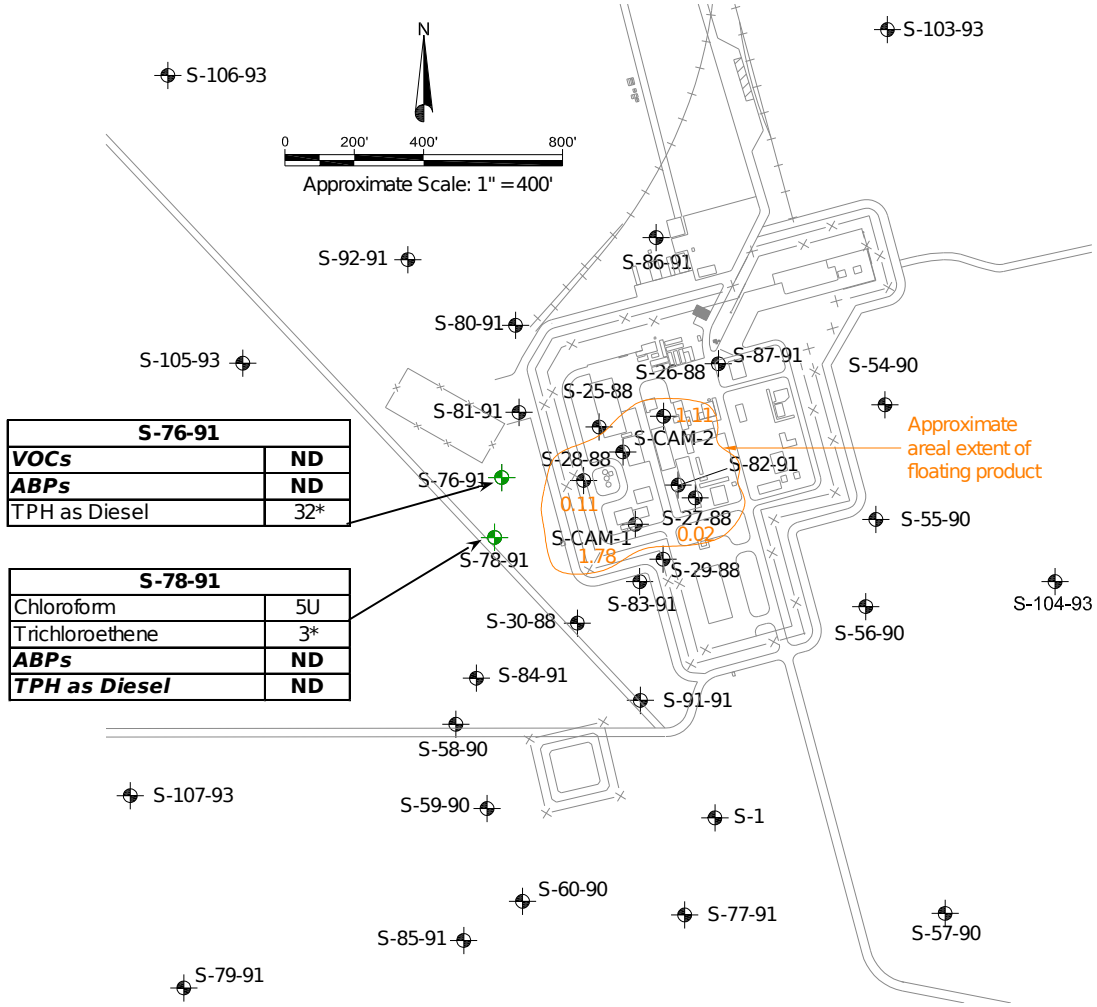
(in ug/L)

SWMU 13/30 LNAPL Thickness



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(in ug/L)

2005 Sampling Event

Summary of Results:

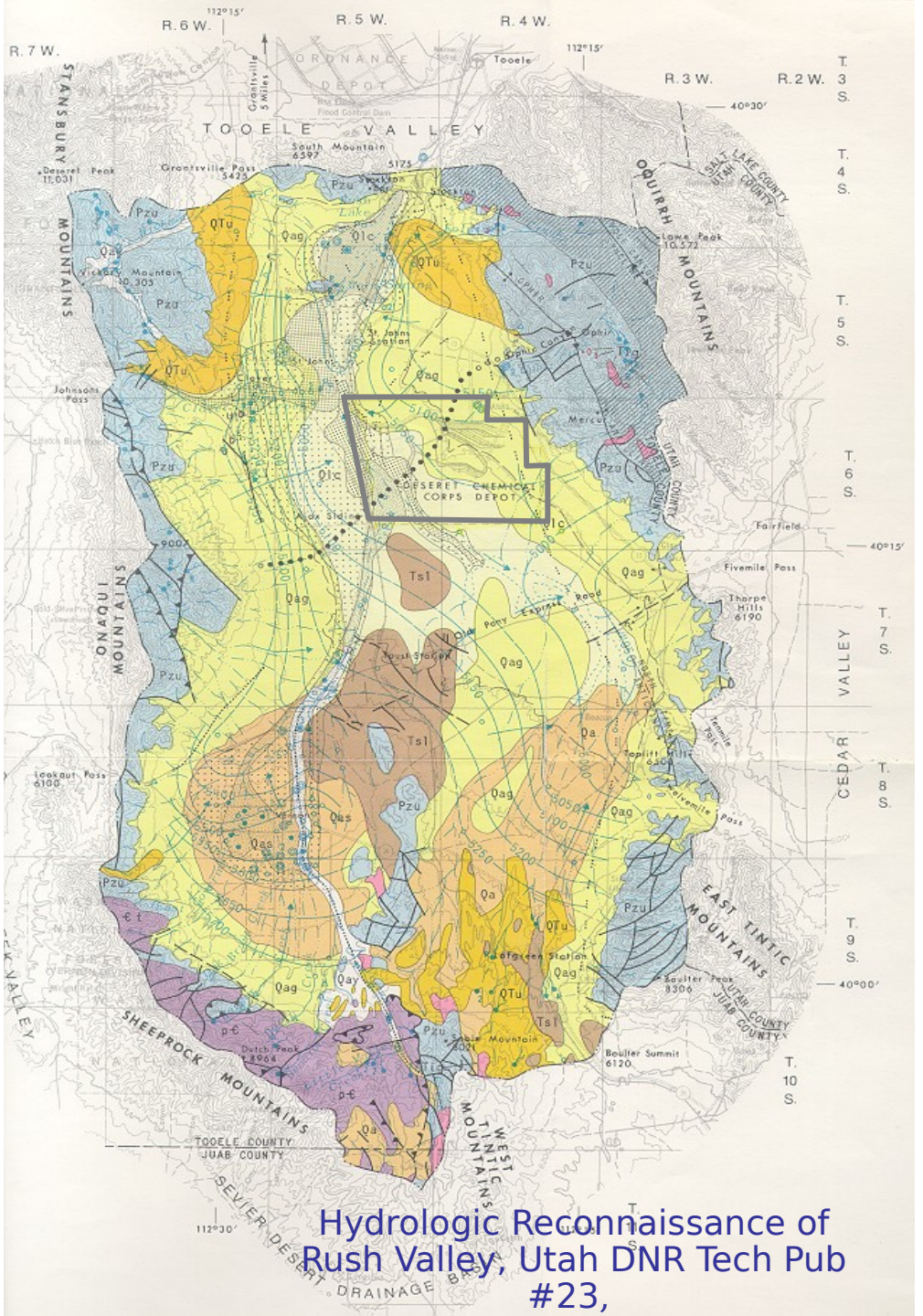
- No significant changes in groundwater elevations or flow direction from previous events.
- Chloroform and bis (2-ethylhexly) phthalate found at SWMUs 26 and 28.
- Arsenic above the drinking water standard was found in SWMUs 1, 3, 9, and 25.
- Carbon Tetrachloride confirmed at SWMU 25.
- LNAPL detected in four wells from

2005 Sampling Event

Questions??

Hydrogeology Review

Geologic Map



Hydrologic Reconnaissance of Rush Valley, Utah DNR Tech Pub #23,

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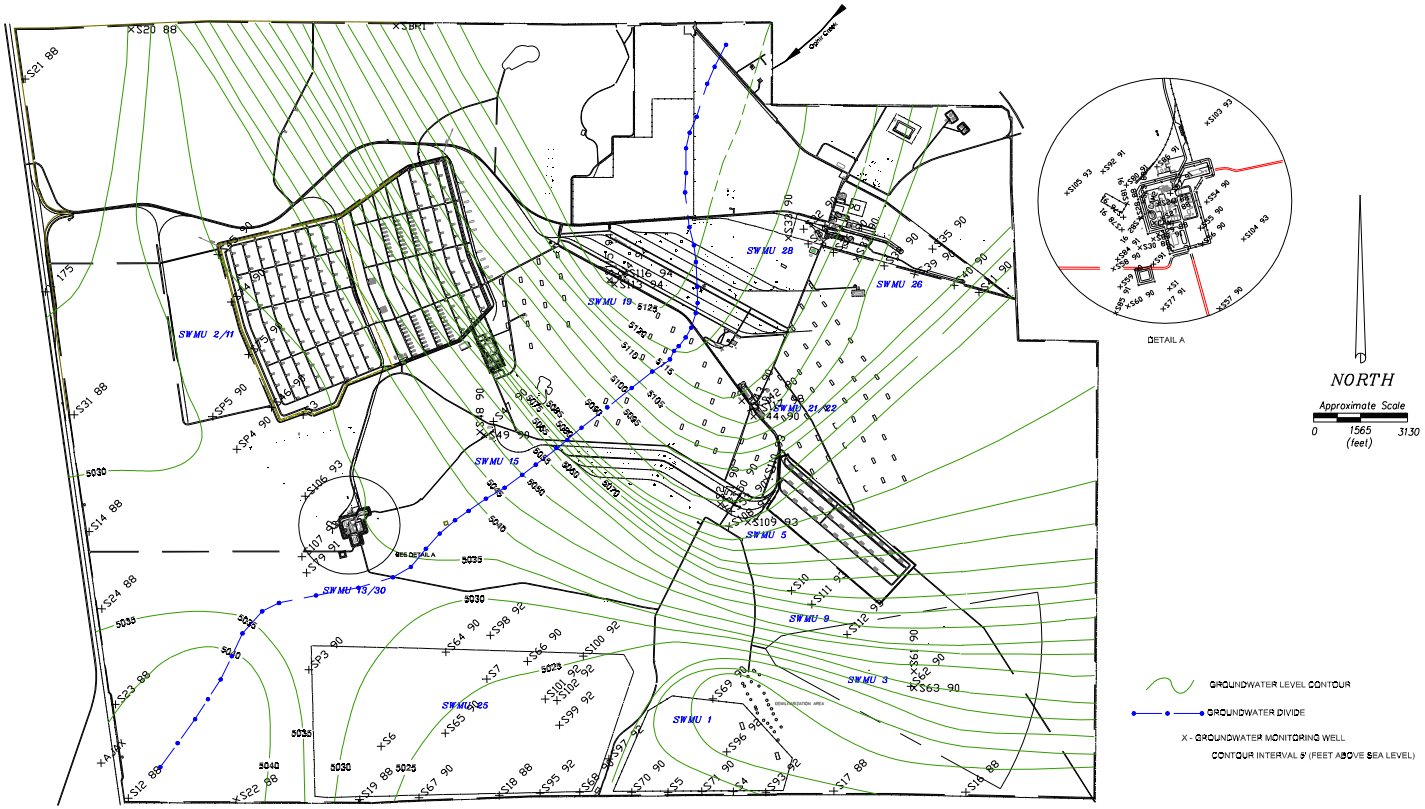
Site-Wide Groundwater Elevation Contours



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